

REMARKS

This Amendment is submitted in response to the Office Action mailed February 25, 2004. In the final Office Action, the Examiner continued to reject Claims 1-2, 5-6, 12 for the reasons of record, rejecting the above claims as anticipated by Levac, and further rejecting Claims 3-4, 7-11 as being unpatentable over Levac in view of Houde et al. And claims 9-10 as being anticipated by Houde et al.

In addition, the Examiner rejected claims 13-30 as being subject to restriction or election requirement. The applicant respectfully submits that the claims 13-30 are directed at the same invention wherein these additional claims relate to the original claims for the reason that the change from a first function to a second alternate function involves a selection of a communication and control protocol. Alternately a selected communication and control protocol in the present invention provides a separate and distinct functionality to the device. Hence the claims 1-30 are enumeration of the same teaching with specific individual and related claims that teach unique features of the present invention. The applicant respectfully requests continued and concurrent examination of the original claims 1-12 as currently amended and the previously added claims 13-30.

The applicant respectfully submits and appeals that the pending claims 1-30 patentably distinguish over Levac and Houde and merit reconsideration for the reasons set forth below in extensive detail:

1. Referring now to the Examiners comments on Claims 1, 5 and 12

1.1 Levac teaching , Col 6 lines 52-55: The Levac teaching refers to the means for simply formatting a text message from one format to a different format and further includes means for deletion of messages.

Rao teaching is more comprehensive, unique and novel in that the one or more functional instructions, communication protocols and control protocols are resident within the mobile device and or within a central server. Rao teaching enables the selection of a functional instruction, a communication protocol or a control protocol such that the mobile device is reconfigured from a first function to a second function utilizing same or different communication and control protocols. The ability to *transform the single physical device* from one function to a second function by software means and further operating with multiple communication and control protocols is not taught by Levac even if combined with Houde.

The communication and control protocols referred to by Rao et al are not simply message formatting protocols as in Levac but fundamentally complex and different communication and control protocols that require significant mathematical and algorithmic processing in real time utilizing the storage and processing power of the mobile device by itself, by the central server or a combination of the mobile device and the central server. The Rao teaching has unique and novel utility in that it provides flexibility, and dynamic reconfiguration using complex software code and processing techniques.

1.2 Levac teaching Col 3 lines 40-59: This refers to a text message file such as a .msa file and date, time, destination and run time. The Levac application is specific to displaying messages such as on a marquee board.

Rao et al teach the means for communication of voice, text, audio, video and data including Internet Protocol based communication. These are very complex communications utilizing significant digital data processing. The communication protocols such as IP, Wi-Fi, CDMA, TDMA, Bluetooth or other emerging communication and control protocols are enabled and rendered on the mobile device by the Rao teaching, with the further ability to transform the device from a first communication protocol such as a cellular communication protocol to a second communication protocol such as IP based communication. The change in communication and control protocols enables the same physical device to perform a first function such as a cellular telephone for voice communication and upon dynamic reconfiguration to a second communication and control function such as an IP based telephone or an IP based intelligent appliance controller.

These unique and novel features require dynamic software processing at the device level, the server level and or a combination of the two and further require assembling functional instructions from software code which are not anticipated nor taught by Levac nor made possible in their system definition. The nomenclature of protocol converter as referred to by Rao et al has a far different and complex meaning than the simple text message conversion protocol referred to by Levac et al. Rao et al respectfully request a reexamination in light of the contextual meaning and the specific teaching of the present invention.

1.3 Levac Col 5 lines 13-25 and lines 40-50: Once again the Levac teaching refers to a message marquee and the means for conversion of said text message to one that is compatible with message marquees in lines 13-25 and refers to the *message* being enabled for formatting on alpha numeric pagers. Lines 40-50 refer to the message being formatted for an inbox, a DDE and others. It further refers to having an in box on the message server and an interface. Lines 25-39 refer to an asynchronus message port for communication with a hardwired message marquee from the protocol converter. The protocol converter sends a converted message to the marquee. The protocol converter is distinct and external to the message marquee (client device).

Rao teaching does not claim any features related to formatting a text message from one formatting protocol to a second formatting protocol. Rao et al further do not claim an in box for incoming messages. The Levac teaching does not provide the means for converting from a first communication protocol to a second communication protocol within the client device such as a message marquee—the message marquee simply receives a converted message from an external protocol converter.

Where as the Rao teaching provides for dynamic conversion from a first communication protocol to a second communication protocol wherein the client device such as a message marquee or a mobile device would be able to communicate utilizing one or more protocols resident within said device by utilizing its built-in processing capabilities in a standalone manner, using the processing capabilities of the central server or a combination of both. Alternately the Rao teaching enables the accessing, storage, assembly and processing of communication protocols and functional instructions within the client device itself and does not depend on external device drivers.

As an illustrative example the Rao teaching would enable an intelligent message marquee to be enabled for communication with text only or with text and voice in one or more languages. To illustrate further the Rao teaching would enable an intelligent message marquee to be dynamically converted from text only to voice in one or more languages and further enable said message marquee to receive communication using Bluetooth, Wi-Fi and other communication modes utilizing its own internal reconfiguration capabilities. Illustratively these unique capabilities are not anticipated by Levac nor are they obvious. Thus the Rao teaching is unique and novel and distinguishes from prior art.

1.4 Levac Col 6 lines 21-31: This refers to message files, message directory, job numbers and means for assigning a unique job number to a message file. It further refers to the protocol converter related to one or more sites where different marquees are located. It refers to the protocol being selected based on site profile. Protocols are selected based on the message and logged.

Rao et al once again respectfully submit that the references are to different means of formatting a text message and the nomenclature of protocol converter as used by Levac simply refers to formatting the said text message onto a client device such as a message marquee. The marquee operates with a specific protocol and in the Levac teaching is not enabled for reconfiguration to an alternate protocol. The message itself is converted by the so called protocol converter (formatter) for appropriate delivery to the specific marquee. The marquee is not transformed by software—the formatted message is simply displayed. Whereas in the Rao teaching the device is capable of transformation for communication utilizing a first communication protocol to a second communication protocol and from a first utility to a second utility.

1.5 Levac Col 3 lines 1-9: Once again Levac refers to taking a single text message and communicating said text message to one or more networked devices such as pagers, marquee boards etc. The single message is formatted for delivery to diverse devices by having a site reference table and noting the protocols (formats) that are appropriate for each individual device in the network. The message is formatted—the device remains the same with the same original capabilities for communication. As an example in the Levac teaching a pager remains capable of cellular communication if it was originally designed and configured for cellular communication. The said message is formatted for the pager by their protocol converter (formatter). Their network does not synergistically leverage the storage and processing capabilities of the different devices in the network with a central server.

Whereas, in the Rao teaching the communication of messages and other information is enabled in a plurality of true communication protocols with the ability for the device to transform itself from one communication protocol to another and from one function to another. As an illustrative example, in the Rao teaching the pager could be configured as a cellular phone.

2.0 Referring now to the Examiners comments on Claims 2 and 6:

Rao et al teach the means for a handheld computing device to operate with different communication protocols such as cellular communication, IP based communication, Wi-Fi or any other communication protocol. Rao teaching enables said hand held computing device to operate with a selected communication protocol. Generally the hardware for a computing device is standard. In the Rao teaching the processor of the device is enabled for recognizing an alternate communication

protocol and reconfiguring the device for said alternate communication protocols by software means. Levac et al do not teach these novel features. Alternately, the hand held computing device may be reconfigured for other tasks such as a controller, a telephone or other uses by software means. Levac does not teach these capabilities.

3.0 Referring now to the Examiners comments on Claims 3,4and 7-11:

Houde does not teach the means for transforming a device originally configured as a cellular telephone to a handheld computing device. Whereas Rao et al teach the means for transforming the functionality of the cellular telephone which has limited processing capability to a hand held computer with enhanced computational capabilities by leveraging the limited processing power and storage of the cellular telephone device with the processing power and storage capabilities of a central server.

Alternately, Houde does not teach the means for transforming a device originally configured as a handheld computing device to a cellular telephone device. Whereas Rao et al teach the means for transforming the functionality of the handheld computing device which has limited processing capability to a cellular telephone with enhanced computational capabilities by leveraging the limited processing power and storage of the handheld computing device with the processing power and storage capabilities of a central server to communicate on one or more communication protocols such as IP, CDMA, TDMA, Wi-Fi since these communication protocols may be rendered in software on the computing device itself or in conjunction with a central server.

4.0 Referring now to the Examiners comments on Claims 9-10:

Houde does not teach the means for transforming a device originally configured as an IP based telephone to an intelligent appliance. Whereas Rao et al teach the means for transforming the functionality of the IP based telephone which has limited processing capability to an intelligent appliance with enhanced capabilities by leveraging the limited processing power and storage of the IP based telephone device with the processing power and storage capabilities of a central server.

Applicant addresses and solves the problem for ubiquitous communication, computation and other applications using a single mobile device that can be transformed by software means from one type of device to another and communicate in a multiplicity of communication protocols for different types of functional needs.

In the Rao teaching, a single communication device is enabled to operate with a plurality of communication protocols to dynamically perform a multiplicity of communication, computation and control tasks in a stand alone manner and or in conjunction with a local or network server. Rao et al teaching provides a means by which the internal processing power of the communication device is fully leveraged in a stand alone manner and or in conjunction with the tremendous processing power of the local and or network server; to enable interaction with disparate communication devices and servers, for dynamic reconfiguration by software means of the functionality of the communication device itself and the execution of complex tasks that are computation and process intensive across a wired or wireless network.

Applicant further provides a means for communication on one or more channels of the communication device and the ability to multiplex the communication channels for transmission and receiving using one or more communication protocols.

It is respectfully submitted that Lavac, even if combined with Houde, does not teach or show the aspects as recited in Claims 1-12 herein, as well as the previously submitted Claims 13-30. The applicant is available in the event the examiner wishes to discuss the present invention over the phone at the telephone number below and the applicant is also ready to appear in person.

The applicant sincerely appreciates the examiners comments. The applicant has amended the claims for clear and unambiguous teaching.

Respectfully submitted,

A handwritten signature in black ink that reads "Raman K. Rao". The signature is written in a cursive, flowing style.

By

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